WHAT IS CLAIMED IS:

1   1.   A method for input parameter binding, comprising:

2   when executing a statement, comparing data in an application structure of the

3 statement with optimization information in a bind-in structure; and

4   when there is a match between the data in the application structure and data in the

5 optimization information in the bind-in structure, executing the statement with the

6 optimization information.

1   2.   The method of claim 1, further comprising:

2   when there is not a match between the data in the application structure and the

3 optimization information, regenerating optimization information.

1   3.   The method of claim 1, further comprising:

2   at bind time, storing the optimization information in the bind-in structure.

1   4.   The method of claim 1, wherein the optimization information includes at

2 least one of data type, length, Coded Character Set Identifier, an array size, an indication

3 of whether conversions are required, and an indication of whether the required

4 conversions are valid.

1   5.   The method of claim 1, further comprising:

2   for fixed length data,

3   storing an increment length by which a data pointer that is pointing to data

4 in an application program area is to be incremented to find a location of a next data

5 value; and

6   calculating the location of the next data value by adding the increment

7 length to the data pointer.

1   6.   The method of claim 1, further comprising:

2   for distributed processing, at a client computer, calculating a location of data in a

3   client communications buffer.

1   7.   The method of claim 1, further comprising:

2   for distributed processing, at a server computer, calculating a location of data in a

3   server communications buffer.

1   8.   The method of claim 1, further comprising:

2   for distributed processing, at a client computer, calculating a location of data in an

3   application program address space.

1   9.   The method of claim 1, further comprising:

2   when returning a handle to a cursor to a result set from a stored procedure to an

3   application, recalculating the optimization information.

1   10.   A method for output parameter binding, comprising:

2   when executing a statement, comparing data in an application structure of the

3   statement with optimization information in a bind-out structure; and

4   when there is a match between the data in the application structure and data in the

5   optimization information in the bind-out structure, executing the statement with the

6   optimization information.

1   11.   The method of claim 10, further comprising:

2   when there is not a match between the data in the application structure and the

3   optimization information, regenerating optimization information.

1   12.   The method of claim 10, further comprising:

2   at bind time, storing the optimization information in the bind-out structure.

1   13.   The method of claim 10, wherein the optimization information includes at

2   least one of data type, length, Coded Character Set Identifier, an array size, an indication

3   of whether conversions are required, and an indication of whether the required

4   conversions are valid.

1   14.   The method of claim 10, further comprising:

2   for fixed length data,

3   storing an increment length by which a data pointer that is pointing to data

4   in an application program area is to be incremented to find a location of a next data

5   value; and

6   calculating the location of the next data value by adding the increment

7   length to the data pointer.

1   15.   The method of claim 10, further comprising:

2   for distributed processing, at a client computer, calculating a location of data in a

3   client communications buffer.

1   16.   The method of claim 10, further comprising:

2   for distributed processing, at a server computer, calculating a location of data in a

3   server communications buffer.

1   17.   The method of claim 10, further comprising:

2   for distributed processing, at a client computer, calculating a location of data in an

3   application program address space.

1   18.   The method of claim 10, further comprising:

2   when returning a handle to a cursor to a result set from a stored procedure to an

3   application, recalculating the optimization information.

1   19.   An article of manufacture including a program for input parameter

2   binding, wherein the program causes operations to be performed, the operations

3   comprising:

4   when executing a statement, comparing data in an application structure of the

5   statement with optimization information in a bind-in structure; and

6   when there is a match between the data in the application structure and data in the

7   optimization information in the bind-in structure, executing the statement with the

8   optimization information.

1   20.   The article of manufacture of claim 19, wherein the operations further

2   comprise:

3   when there is not a match between the data in the application structure and the

4   optimization information, regenerating optimization information.

1   21.   The article of manufacture of claim 19, wherein the operations further

2   comprise:

3   at bind time, storing the optimization information in the bind-in structure.

1   22.   The article of manufacture of claim 19, wherein the optimization

2   information includes at least one of data type, length, Coded Character Set Identifier, an

3   array size, an indication of whether conversions are required, and an indication of

4   whether the required conversions are valid.

1   23.   The article of manufacture of claim 19, wherein the operations further

2   comprise:

3   for fixed length data,

4   storing an increment length by which a data pointer that is pointing to data

5   in an application program area is to be incremented to find a next data value; and

6   calculating the location of the next data value by adding the increment

7   length to the data pointer.

1   24.   The article of manufacture of claim 19, wherein the operations further

2   comprise:

3   for distributed processing, at a client computer, calculating a location of data in a

4   client communications buffer.

1   25.   The article of manufacture of claim 19, wherein the operations further

2   comprise:

3   for distributed processing, at a server computer, calculating a location of data in a

4   server communications buffer.

1   26.   The article of manufacture of claim 19, wherein the operations further

2   comprise:

3   for distributed processing, at a client computer, calculating a location of data in an

4   application program address space.

1   27.   The article of manufacture of claim 19, wherein the operations further

2   comprise:

3   when returning a handle to a cursor to a result set from a stored procedure to an

4   application, recalculating the optimization information.

1   28.   An article of manufacture including a program for output parameter

2 binding, wherein the program causes operations to be performed, the operations

3 comprising:

4   when executing a statement, comparing data in an application structure of the

5 statement with optimization information in a bind-out structure; and

6   when there is a match between the data in the application structure and data in the

7 optimization information in the bind-out structure, executing the statement with the

8 optimization information.

1   29.   The article of manufacture of claim 28, wherein the operations further

2 comprise:

3   when there is not a match between the data in the application structure and the

4 optimization information, regenerating optimization information.

1   30.   The article of manufacture of claim 28, wherein the operations further

2 comprise:

3   at bind time, storing the optimization information in the bind-out structure.

1   31.   The article of manufacture of claim 28, wherein the optimization

2 information includes at least one of data type, length, Coded Character Set Identifier, an

3 array size, an indication of whether conversions are required, and an indication of

4 whether the required conversions are valid.

1   32.   The article of manufacture of claim 28, wherein the operations further

2 comprise:

3   for fixed length data,

4   storing an increment length by which a data pointer that is pointing to data

5 in an application program area is to be incremented to find a next data value; and

6   calculating the location of the next data value by adding the increment

7   length to the data pointer.

1   33.   The article of manufacture of claim 28, wherein the operations further

2   comprise:

3   for distributed processing, at a client computer, calculating a location of data in a

4   client communications buffer.

1   34.   The article of manufacture of claim 28, wherein the operations further

2   comprise:

3   for distributed processing, at a server computer, calculating a location of data in a

4   server communications buffer.

1   35.   The article of manufacture of claim 28, wherein the operations further

2   comprise:

3   for distributed processing, at a client computer, calculating a location of data in an

4   application program address space.

1   36.   The article of manufacture of claim 28, wherein the operations further

2   comprise:

3   when returning a handle to a cursor to a result set from a stored procedure to an

4   application, recalculating the optimization information.

1   37.   A system for input parameter binding, comprising:

2   when executing a statement, means for comparing data in an application structure

3   of the statement with optimization information in a bind-in structure; and

1   when there is a match between the data in the application structure and data in the

2   optimization information in the bind-in structure, means for executing the statement with

3   the optimization information.

1   38.   A system for output parameter binding, comprising:

2   when executing a statement, means for comparing data in an application structure

3   of the statement with optimization information in a bind-out structure; and

4   when there is a match between the data in the application structure and data in the

5   optimization information in the bind-out structure, means for executing the statement

6   with the optimization information.